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ABSTRACT

This learning module for an eighth-grade introductory technology course is designed to help teachers introduce students to computer-assisted design (CAD) in a communications unit on graphics. The module contains a module objective and five specific objectives, a content outline, suggested instructor methodology, student activities, a list of six resources (including hardware, software, and printed materials), evaluation materials (pre/posttest, cover sheet assignment, and checklist for the cover sheet), and 14 information sheets that lead students through the process of producing a simple picture in the SuperPaint computer program for Macintosh SE. (KC)

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High-Technology Training Module

Module Title: INTRODUCTION TO CAD/COMPUTERS

Unit: COMMUNICATIONS

Course: INTRO TO TECH EDUCATION

Grade Level (s): 8TH GRADE

Developed by: HUGH LOCKERBY

Date: FEBRUARY 27, 1990

School: BALDWIN-WOODVILLE HIGH SCHOOL

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Developed as a part of the High-Technology Training Model for Rural Based Business and Industry, Technical Colleges and Local and State Educational Agencies under Grant No. V199A90151.

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TITLE: INTRODUCTION TO CAD

SCHOOL: BALDWIN-WOODVILLE HIGH SCHOOL, HUGH LOCKERBY

DESCRIPTION:

This module will be used by all 8th graders in the course "Introduction to Technology Education." The purpose of the module will introduce CAD when the students are involved in the communication unit while studying graphics. The student that continues in the Tech Ed programs will thus have basic knowledge using computers which will be reinforced in subsequent courses.

MODULE OBJECTIVE/COMPETENCIES

Given a Macintosh SE Computer and Super Point program the student will develop a CAD Cover sheet emphasizing "Technology"consistent with criteri on the cover sheet checklist.

SPECIFIC OBJECTIVES:

Upon completion of this activity the learner will be able to:

1. Start, boot, save, and store data using the Mac SE Computer
2. Design a technology cover sheet to be used on assignments.
3. Compare the cover sheet with check list.
4. Print out a copy for evaluations
5. Understand the functions of the visual parts of the computer, (keyboard, screen, mouse)

CONTENT OUTLINE

I. INTRODUCTION

A. Visible Part and Usage

1. Screen
2. Keyboard
3. Mouse

B. Usage

1. Switch
2. Programs on hard drive
3. How to enter program
4. Usage of a program
5. Saving information produced
6. Moving and storing information in proper place
7. Closing program
8. Shut off MacIntosh safely

METHODOLOGY

1. Lead class in demonstration of the MacIntosh computer.
2. Develop self instruction package for students to follow on the MacIntosh. (This will be main part of module.)
3. Lead class in discussion of the self instruction package.
4. Obtain all the necessary instructional and lab materials needed for introducing CAD.

ACTIVITIES FOR STUDENTS

1. Listen and take notes on demonstration of MacIntosh computer.
2. Read self instruction package and perform steps as required.
3. Develop a cover page to be used on all other assignments that will emphasize technology.
4. Complete pre-test.
5. Complete post test.

RESOURCES

1. MacIntosh SE Computer
2. Superpaint Software and Manual
3. High Tech Learning Module
4. Bulletin Boards
5. SE Manual
6. CAD Books

EVALUATIONS

1. Pre/Post Test
2. Cover Sheet Assignment
3. Checklist for Cover Sheet

TECH ED COVER SHEET CHECKLIST

	YES	NO
1. Utilize at least five different graphic tools	_____	_____
2. Use the word processing tool.	_____	_____
3. Use three shades or patterns.	_____	_____
4. Graphics or picture emphasize something in technology	_____	_____
5. Design balanced on sheet.	_____	_____

PRE/POST TEST

NAME_____

1. The components to the Macintosh computer can be divided into _____ visual parts.

2. The _____controls the pointer that selects programs, moves data, and draws graphics.

3. The image and data are shown on the _____.

4. The part that is used for typing is called the _____.

5. Where is the switch located to turn the MAC on?
   a. Lower lefthand corner behind the screen
   b. On the keyboard
   c. The mouse
   d. Top of the screen

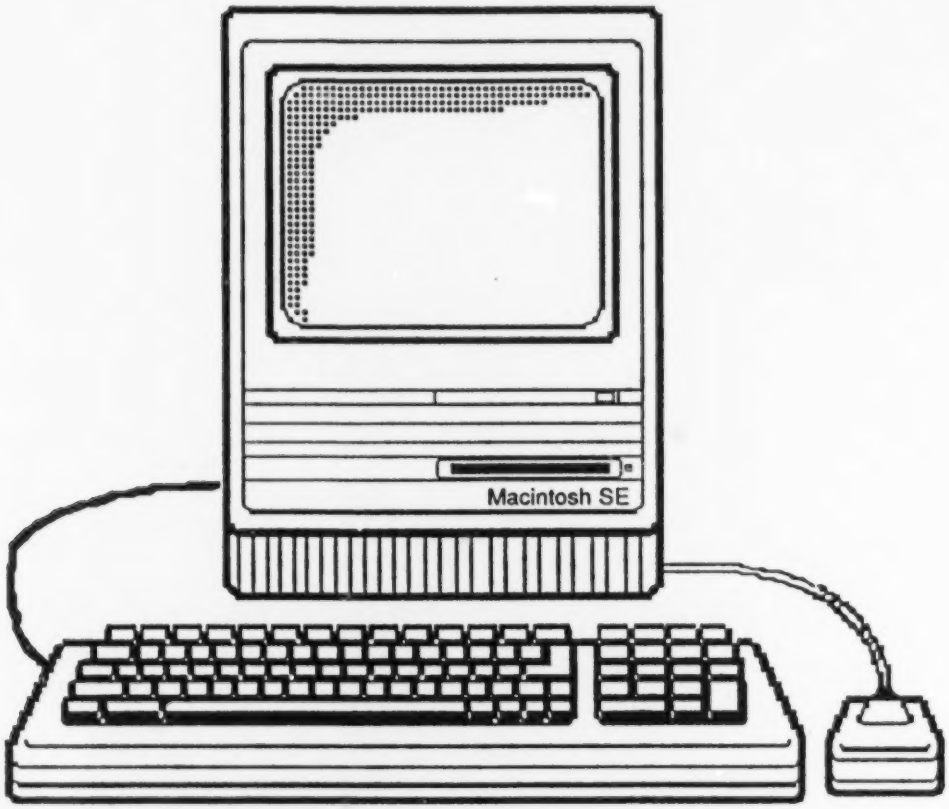
6. The programs are stored in the computer on the
   a. keyboard
   b. floppy disk
   c. hard drive
   d. mouse

7. The quickest way to open/close any file or program is to
   a. select file
   b. double click mouse button on selected file
   c. move arrow to menu, select file, and release mouse button
   d. none of the above

8. The program Super paint is a
   a. word processor
   b. CAM program
   c. program that will paint colored objects
   d. CAD program

9. T or F. To save your data, pull down file menu, choose save, and type in its name.

10. T or F. The little box in the upper left hand corner of the program is used for closing.

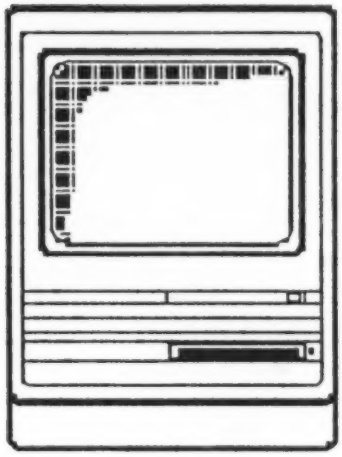


Welcome to the exciting world of computers. I am a macintosh SE computer but you can call me 'MAC'.

Before we can do a lot of fun activities you must learn how to turn me on, enter programs, save and store properly all the data we produce, and properly shut me down.

You will learn these basic practices by producing a simple picture in SuperPaint.

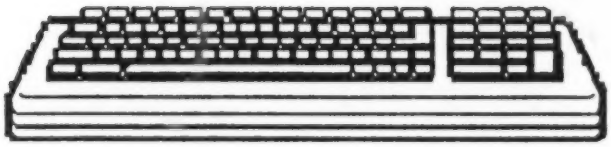
My components can be divided into three parts. Each part is very important in our communicating with each other.



SCREEN

The image and data are shown here.

KEYBOARD

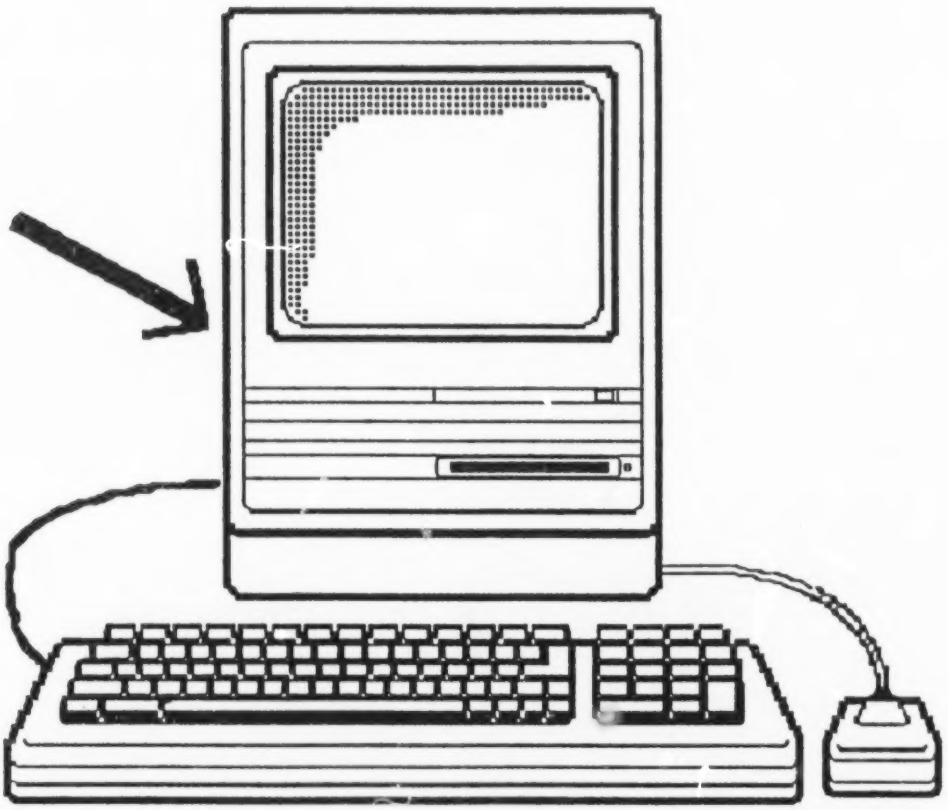


I'm used for typing in words and names when you save things or when using a word-processor

Mouse

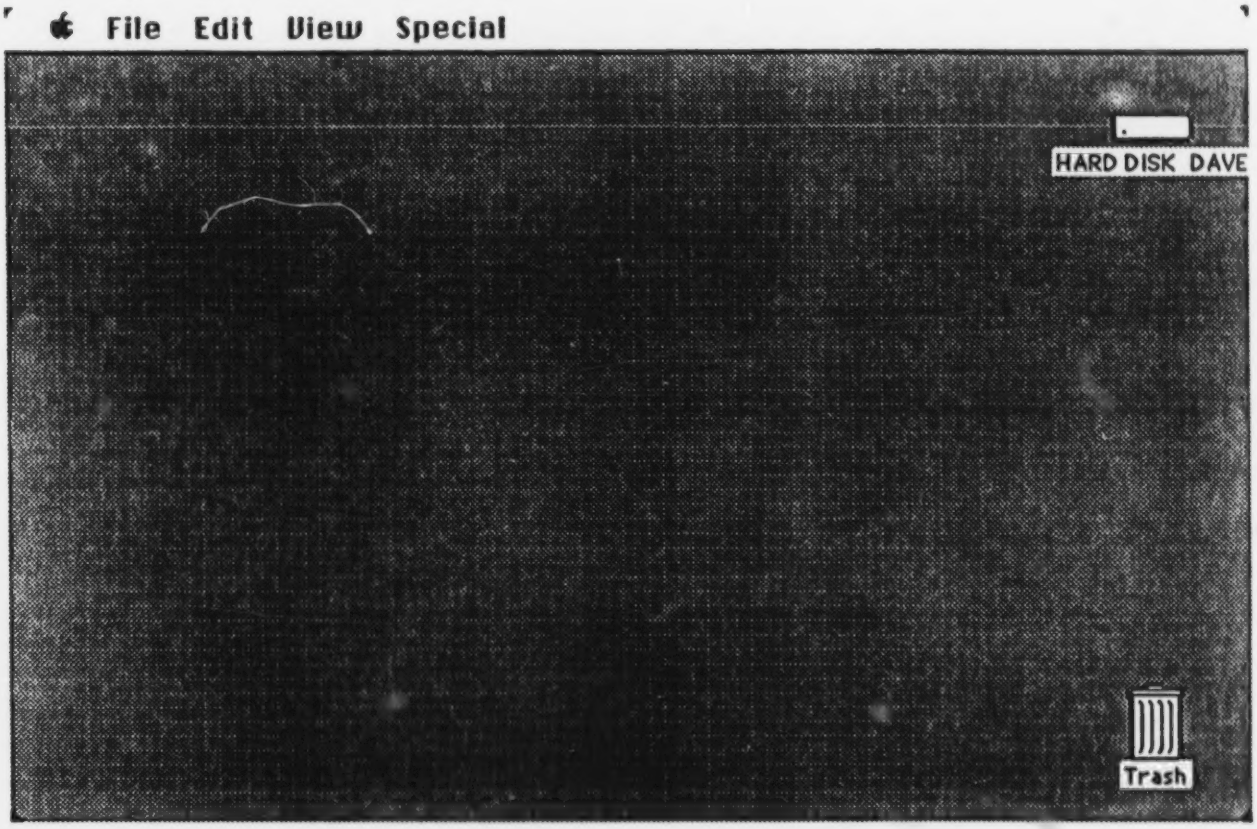
We'll probably spend the most time using this together. It controls the pointer that selects programs, moves data, and draws graphics.

Now that you understand some of my basics, lets get down and have some fun.
You can turn me on by pushing the switch thats located in the lower left-hand corner behind my screen.

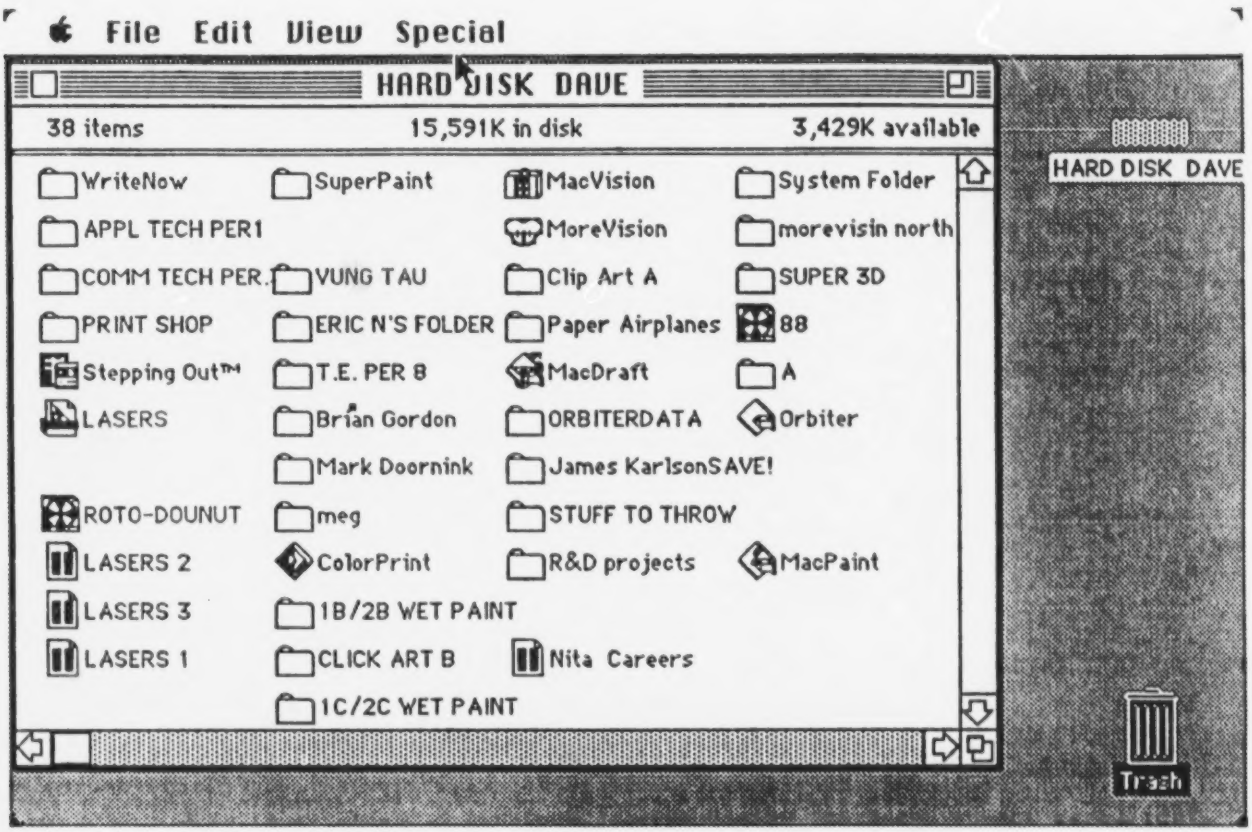


Go ahead and try it.

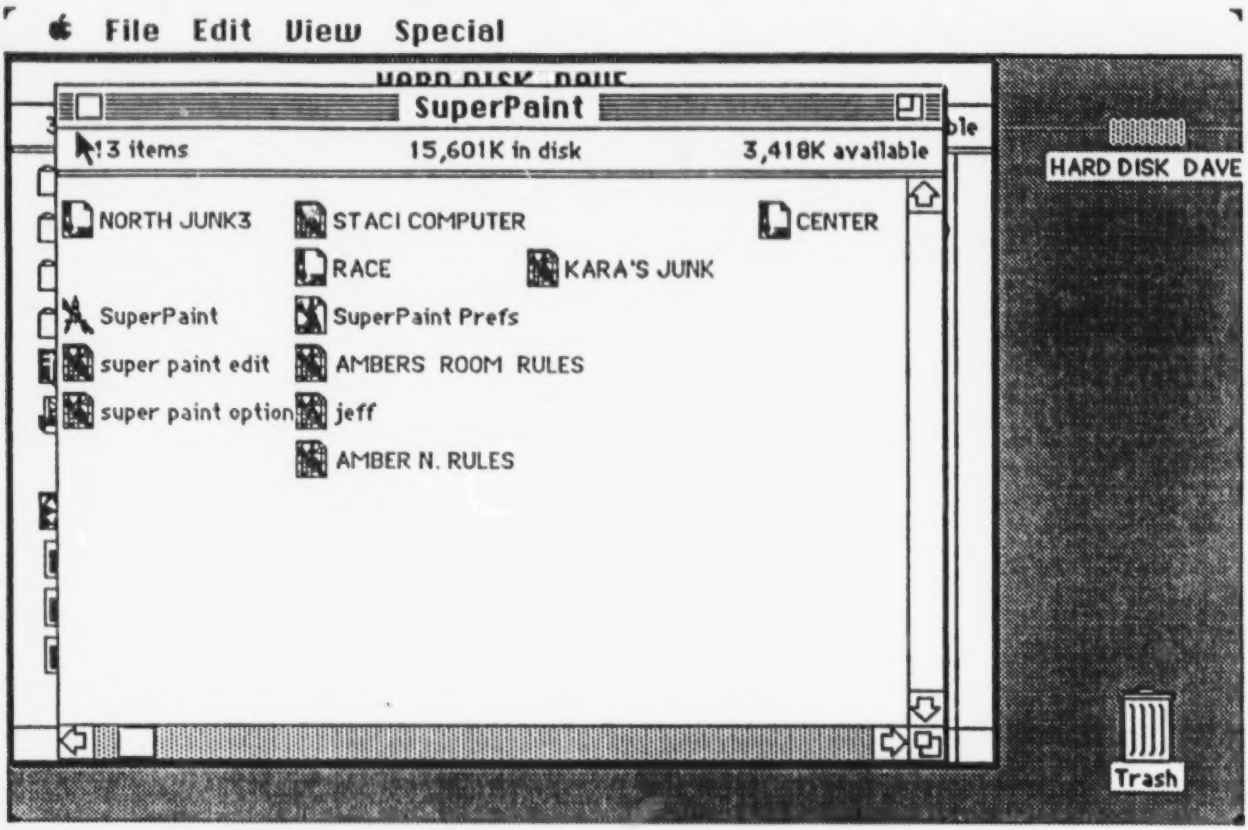
A few seconds after you turn me on you'll see 'Welcome to the Macintosh' on your screen.



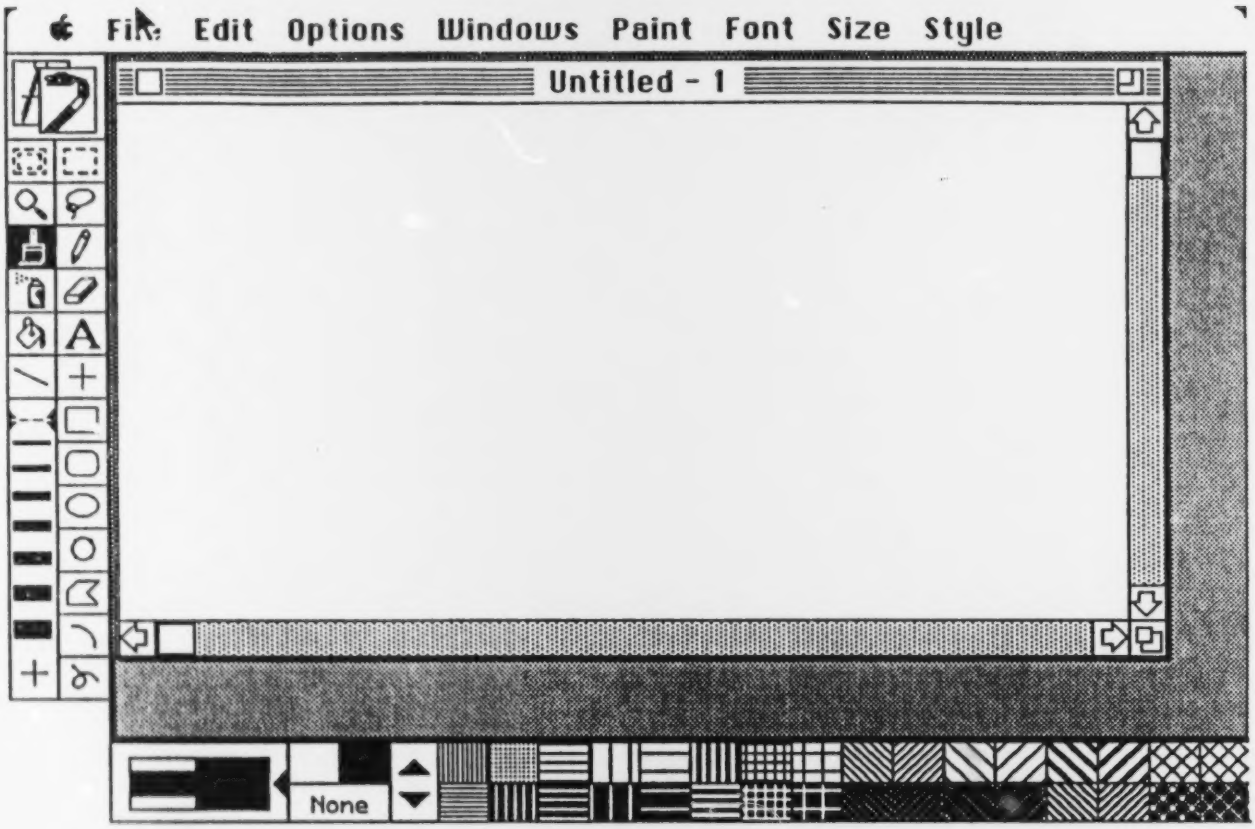
After my greetings to you disappear you'll see this on the screen. With the use of the mouse move the arrow over to hard disk and push the mouse button twice. This is called double-clicking and is the quickest way to open any of my files.



After double-clicking the hard disk a window will appear on my screen showing all the files I contain. Now you have a choice of what you want to do. I recommend that you start with Super Paint. This program is easy to use and a lot of fun. To enter Super Paint you first have to go into the Super Paint folder. To do this you find the picture of a folder: 🗀 with SuperPaint by it, move the pointer over the folder by using the mouse, and double-click it.



Now you have enter the Super Paint folder. There is one more step before the fun actually begins. You now have to move the pointer to the super paint symbol: and double-click again. *Remember this is the quickest way to open up any file(or folder) in me.



Now that you are in Super Paint the fun begins. On the left of my screen are variety of tools and options to design many interesting objects. It's up to you to experiment with the tools but I will show you a few. On the bottom of my screen are pattern choices, you should also try. All of this can be accomplished by using the mouse to move the pointer over the tool, pattern, or whatever you wish to select and pushing the mouse button.

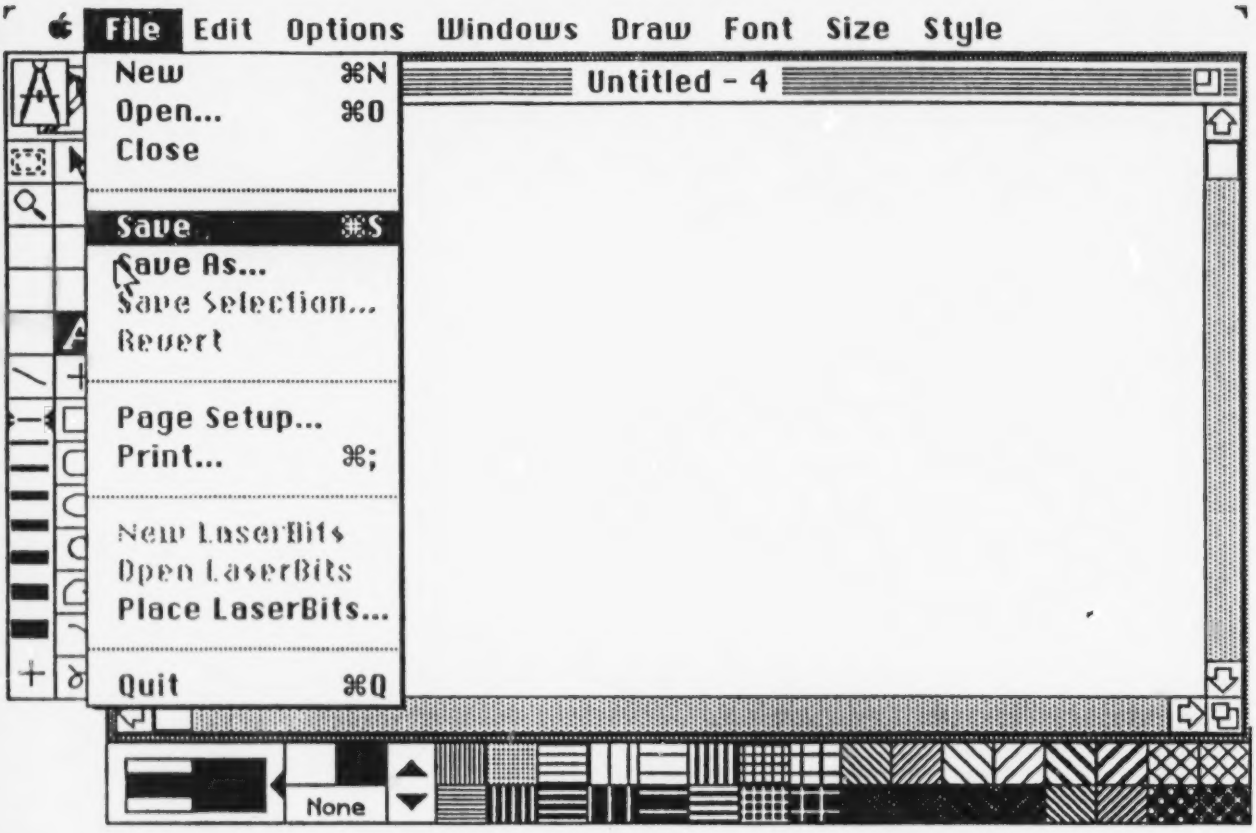
Let's try doing something together. Move the pointer over the picture of the pencil and press the mouse button. This will turn the pointer into a pencil when it is on the screen. To use it as a pencil press the button down and draw.

Now that you have experimented with my program, Super Paint, I want you to draw a picture representing Technology by using the following criteria:

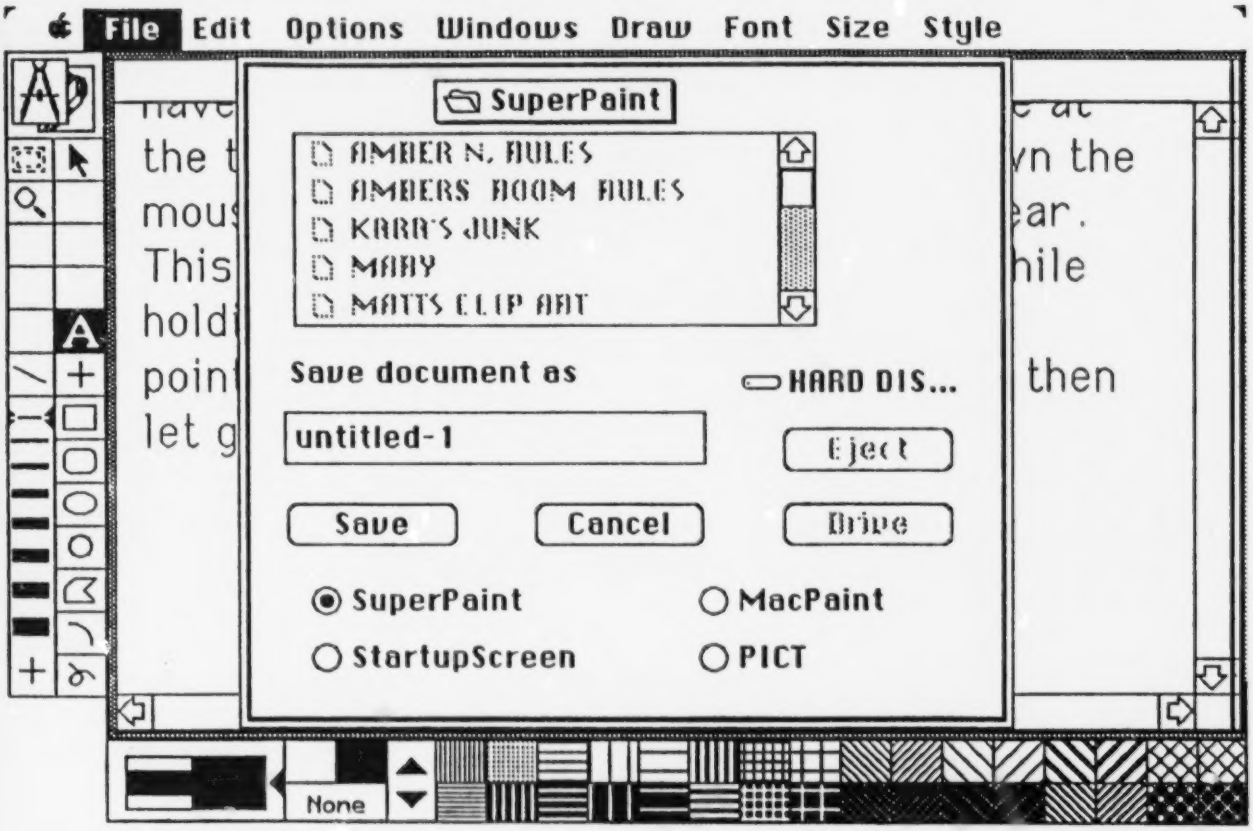
1. Utilize at least five different graphic tools.
2. Use the word processing tool which is represented by the ' **A**'.
3. Use three shades or patterns.
4. The picture should illustrate something in technology.

Do the best job you can and follow the critieria formentioned because it will be graded.

After you have completed your picture you have to save your data properly. To learn how to do this turn to the next page.

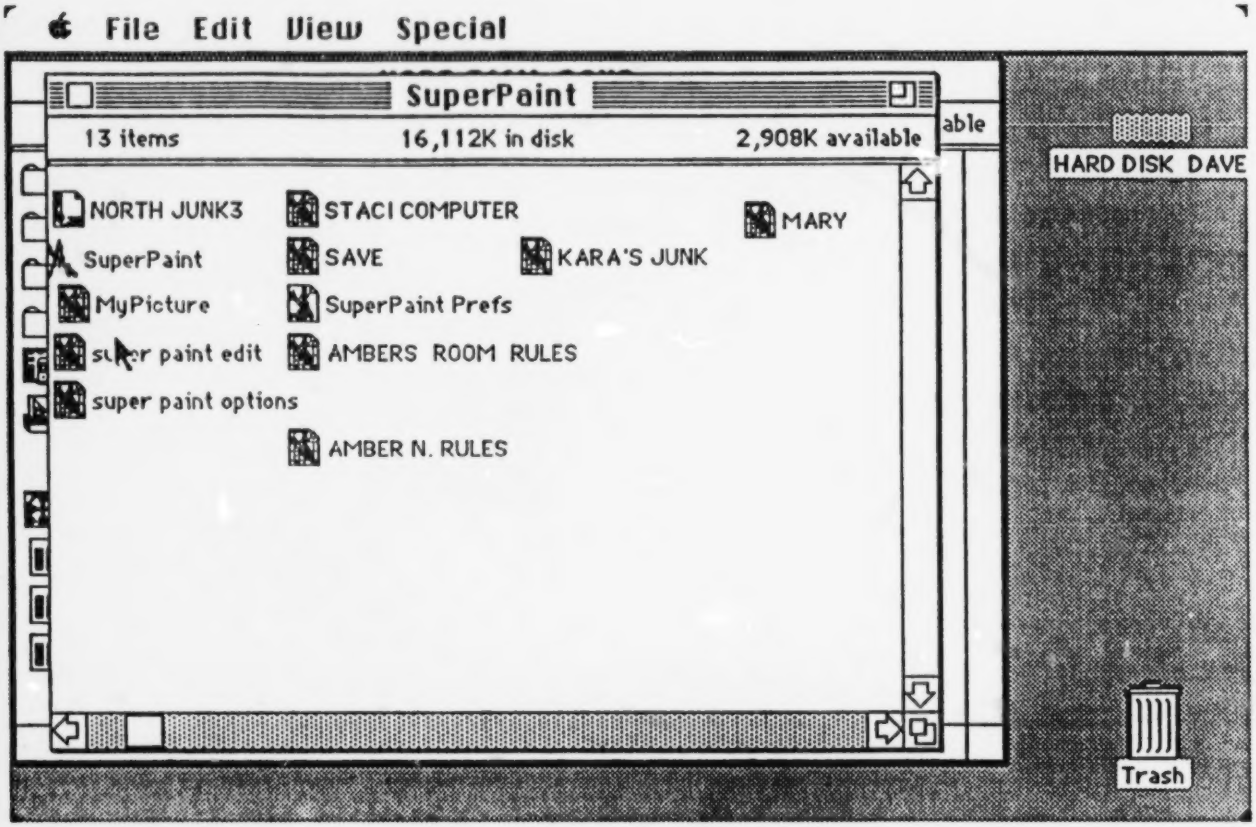


To save your data you have to pull down File menu and choose Save. To do this you have to move the pointer to the word 'File' at the top of the screen. Push and hold down the mouse button. A list of words will appear. This is called a pull-down menu. Now while holding the mouse button down move the pointer to the 'Save' as shown above then let go of the mouse button.

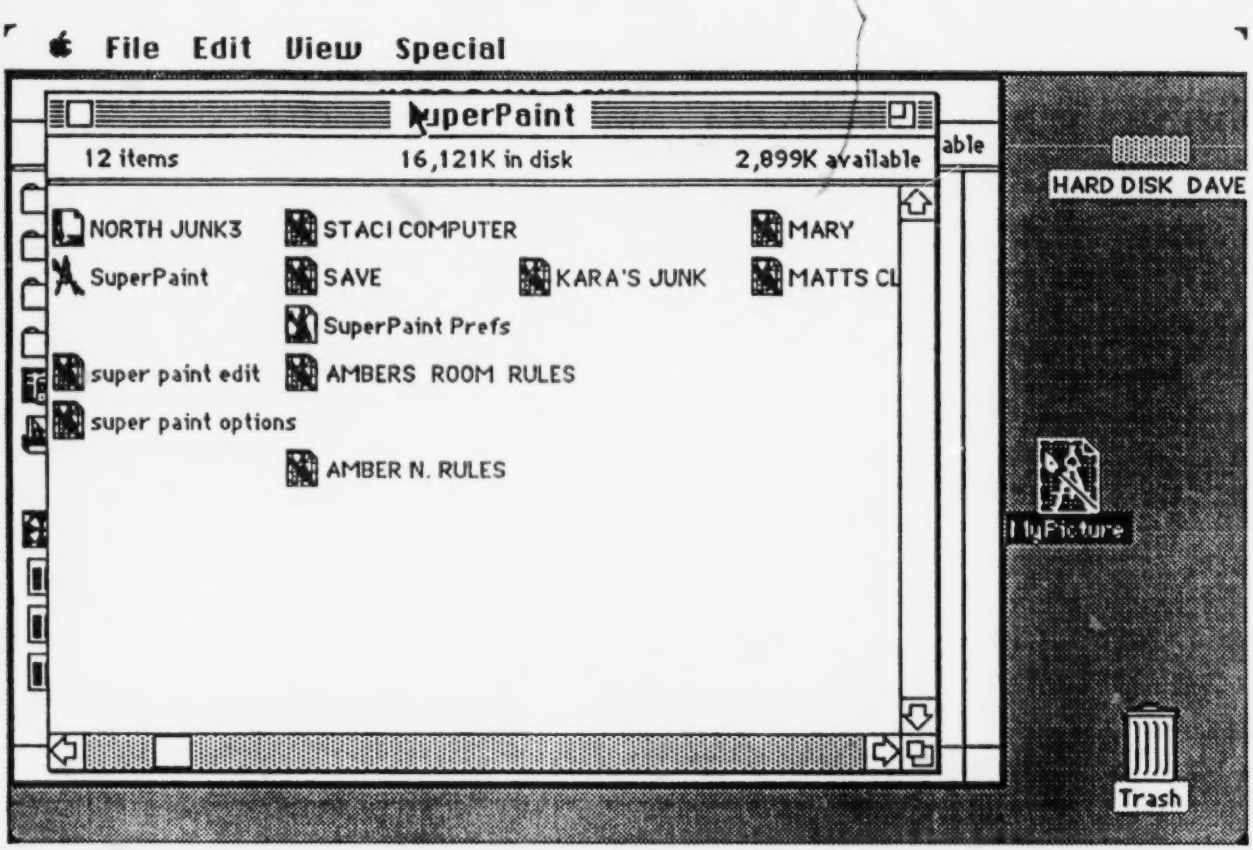


In a few seconds you will see something like the picture above. Before you save your data you first have to pick a name for it. Once you have decided on a name you move the cursor to right after the 'untitled-1' and push the mouse button. Push the 'delete' button on the key board until the 'untitled-1' is gone. Type in the name you decided on and then move the pointer over the word 'save' and push the mouse button. Your data will then be stored so you can call it back later when you need it.

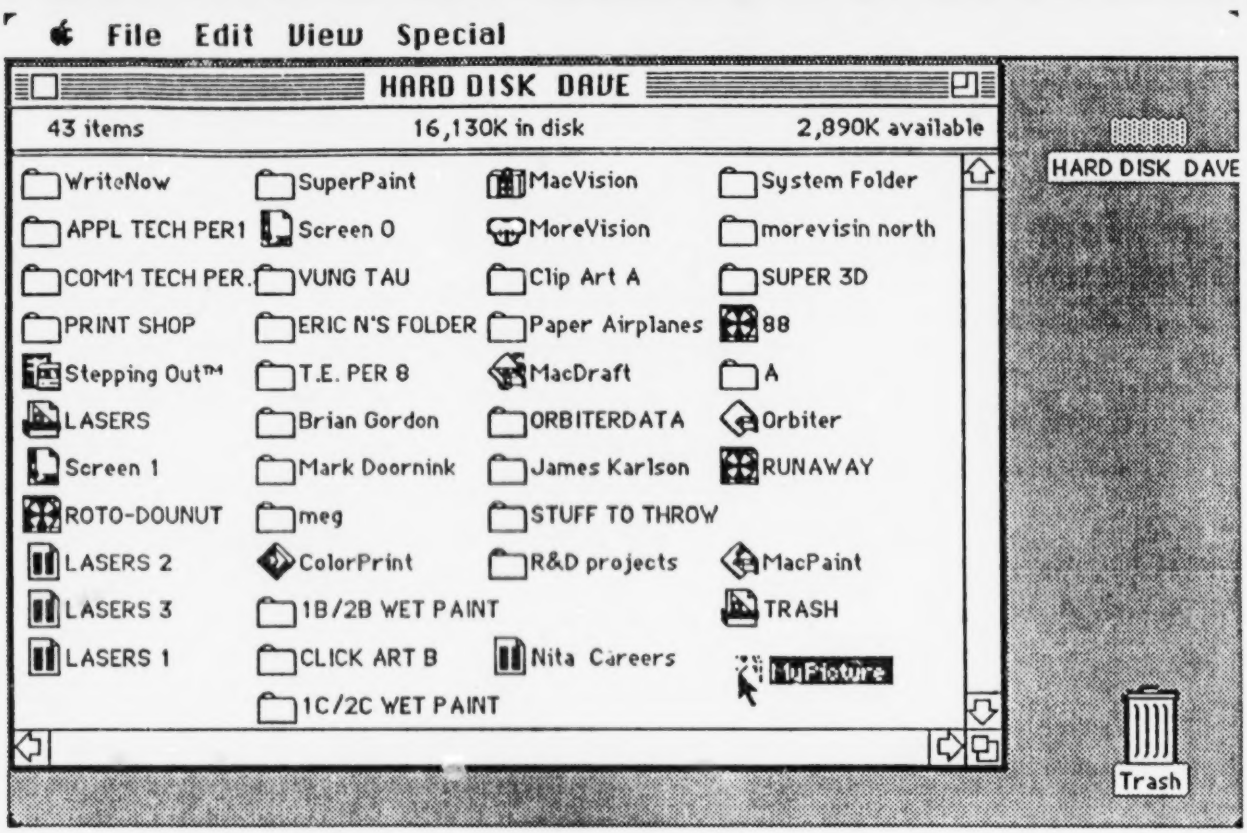
Now you will probably want to quit. To do this go up to the file menu, hold down the button on the mouse, move the pointer to 'quit' and let up the button.



Now all you have left to do is to store your data where you want it. To do this you find your data in the super paint folder. It should be a picture like this: with the name you gave it next to. Move the pointer over the picture and push and hold down the mouse button. Now while holding down the button move the picture over to the right side of the screen.



Now close the super paint folder. You do this by clicking the little box right above the word 'item' and across from super paint. Now go over to the picture of your data and click and hold the mouse button down and move it to in the hard drive folder.



Now that your data is in the right place you are ready to shut me off. To do this you click the little square in the top-righthand corner of the hard drive folder. Now go to the special menu and choose 'shut down'.

I will tell you can safely shut me off and then you can turn off the switch in back.